How to install Linux on an external SSD

www.ghacks.net/2025/07/11/how-to-install-linux-on-an-external-ssd/

July 11, 2025

So, you want to try Linux? Here's a quick guide to help you install Linux on an external SSD.

You were expecting a Linux propaganda, weren't you? Windows 10 is dying, you should..... Nah, it's up to you to choose what you want to use. If you like Windows, use it, there's nothing wrong with that. I want to help those who have already made their decision to try Linux.

Firstly, why do this? You could always install Linux in a virtual machine like VMWare Workstation, that's a good way to familiarize yourself with Linux. But that doesn't give you the proper experience with real hardware, you could end up thinking Linux is slow. A Live USB would be a better way to check how fast your PC is on Linux, and is also useful to check whether all your hardware is compatible with it. But even that is a bit slow in terms of performance, installing Linux on an external SSD while leaving your Windows install intact is a safe way to use Linux.

Things you will need

1. A Windows PC (no joke).
2. An external SSD housed in a USB enclosure (or) a secondary SSD (internal). This guide assumes you are using an external SSD
3. A USB Flash Drive which we will use as the source.

My laptop's BIOS key is F2, it's an old Acer machine. If you're not sure what your BIOS key is, just Google your laptop or motherboard's model to find out.

Preparing your SSD

1. Open Command Prompt as an administrator

2. Type the following command:

Diskpart.

3. Type List Disk.

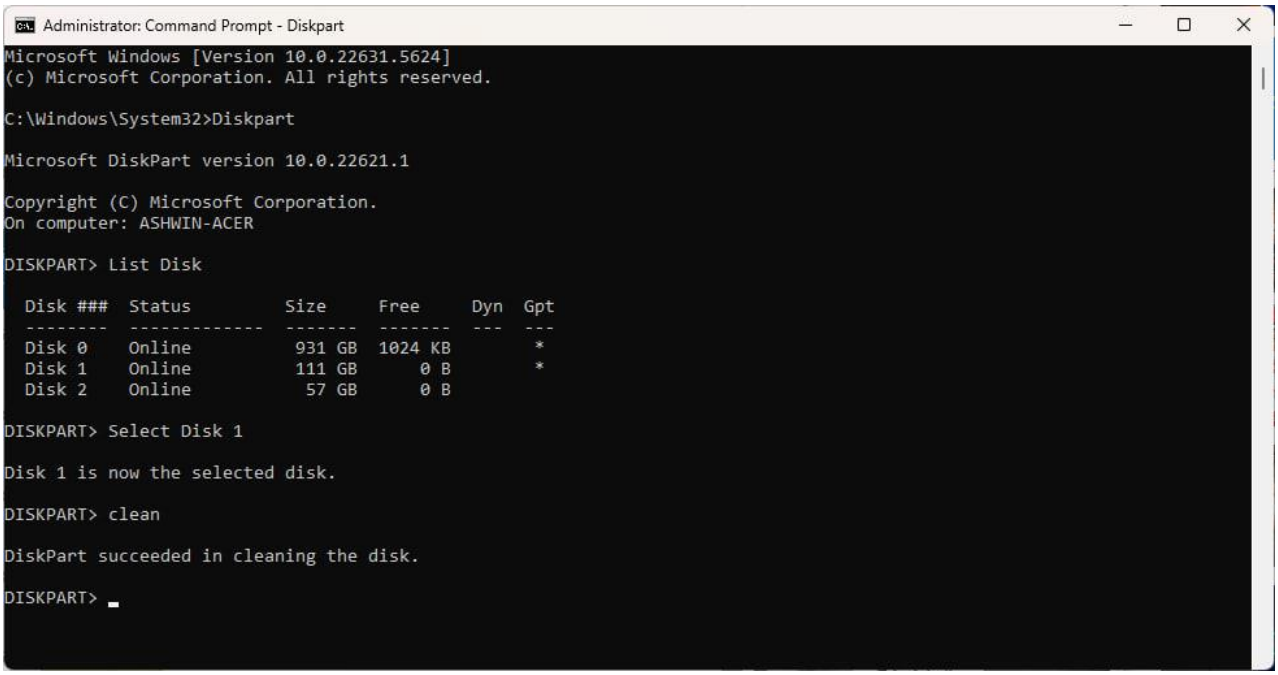
Observe the list, and note the name of your external drive. In my example, it is Disk 1

4. Type Select Disk [Number]

Replace [Number] with the actual number of your drive. Example: Select Disk 1

The next command will erase all contents of the drive. BE CAREFUL.

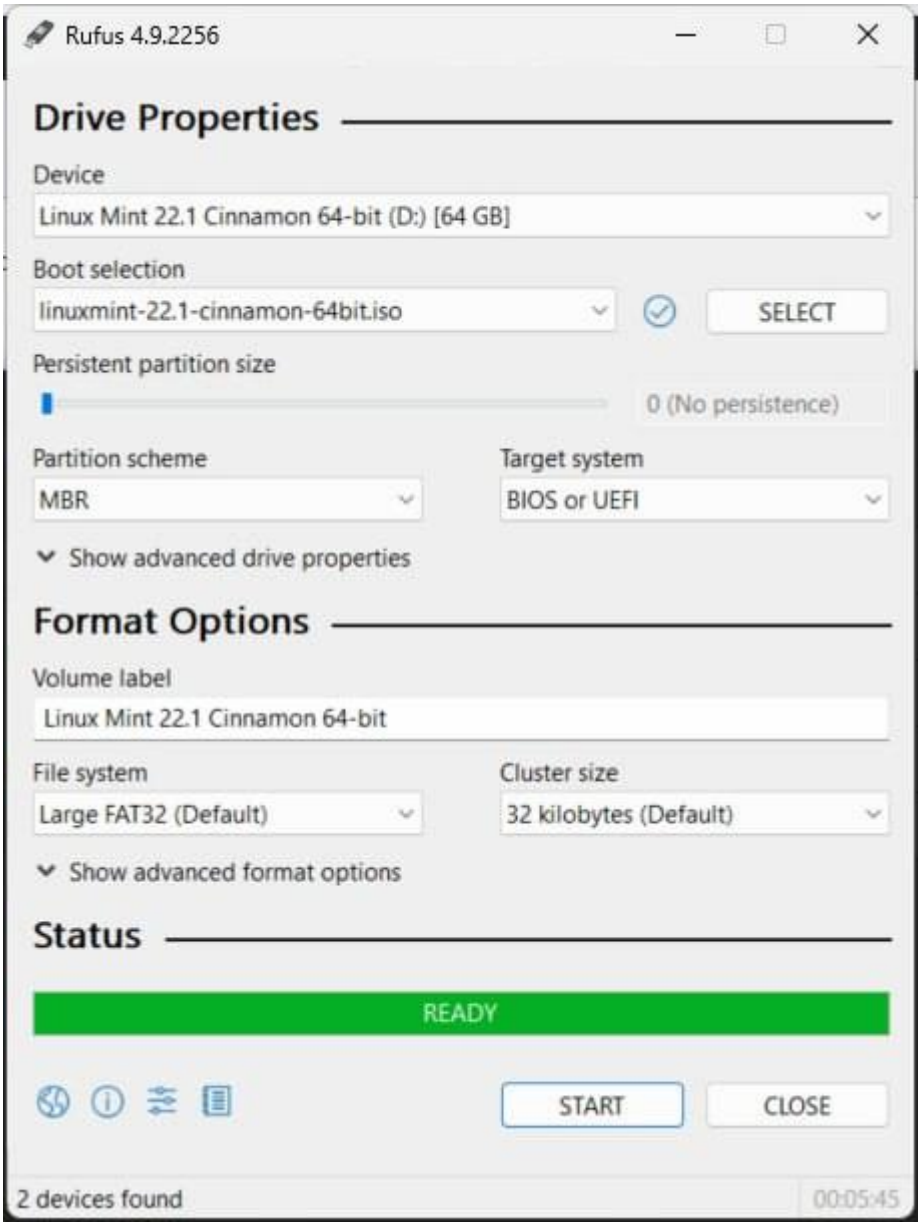
5. Type Clean


Administrator: Command Prompt - Diskpart
Microsoft Windows [Version 10.0.22631.5624]
(c) Microsoft Corporation. All rights reserved.
C:\Windows\System32>Diskpart
Microsoft DiskPart version 10.0.22621.1
Copyright (C) Microsoft Corporation.
On computer: ASHWIN-ACER
DISKPART> List Disk
Disk ### Status Size Free Dyn Gpt
Disk 0 Online 931 GB 1024 KB *
Disk 1 Online 111 GB 0 B *
Disk 2 Online 57 GB 0 B
DISKPART> Select Disk 1
Disk 1 is now the selected disk.
DISKPART> clean
DiskPart succeeded in cleaning the disk.
DISKPART>

You're good to go.

Setting up a bootable USB Flash Drive

1. Download the ISO for the Linux distribution of your choice. I'm using Linux Mint.
2. Download Rufus, and use it to create a bootable USB Flash Drive using the ISO you downloaded.
3. Reboot your PC and go to your BIOS. Change the boot order to USB.



This should allow the Live USB to boot, you can play around with Linux Mint for a while, and then choose to install it.

Note: You may have to disable Secure Boot to install Linux. If you can't access the setting to toggle Secure Boot, it is likely that you haven't set a password for your BIOS. Set something that you will remember, and it should allow you to change the settings. Write down that password, or save it in your password manager for future reference.

In my case, not disabling Secure Boot resulted in the Linux boot screen flashing/flickering. Disabling it solved the problem.

How to fix "Turn off RST"

There is a possibility that you may run into an error while trying to install Linux Mint. It may ask you to turn off RST (Intel Rapid Storage Technology). Long story short, your PC is set to RAID, and we need to change that to AHCI. The problem is you can only do this from Safe Mode, and until you do this, you won't be able to install Linux Mint.

Go read Ubuntu's help page about RST. Did it scare you? Heh!. Here's a simpler method that I got from a video.

Warning: Take a full backup of your data before proceeding.

Switching from RST to AHCI

1. Open Command Prompt as an administrator

2. Type the following command:

bcdedit /set safeboot minimal

3. Reboot your PC and go to your BIOS.

4. Change SATA mode to AHCI

5. Reboot the computer. It will go to safe mode.

6. Open CMD as admin and type this

bcdedit /deletevalue safeboot

Let Windows boot as normal. Works perfectly? Good. Reboot to the BIOS, and set the Boot priority to USB.

How to install Linux Mint on an external SSD

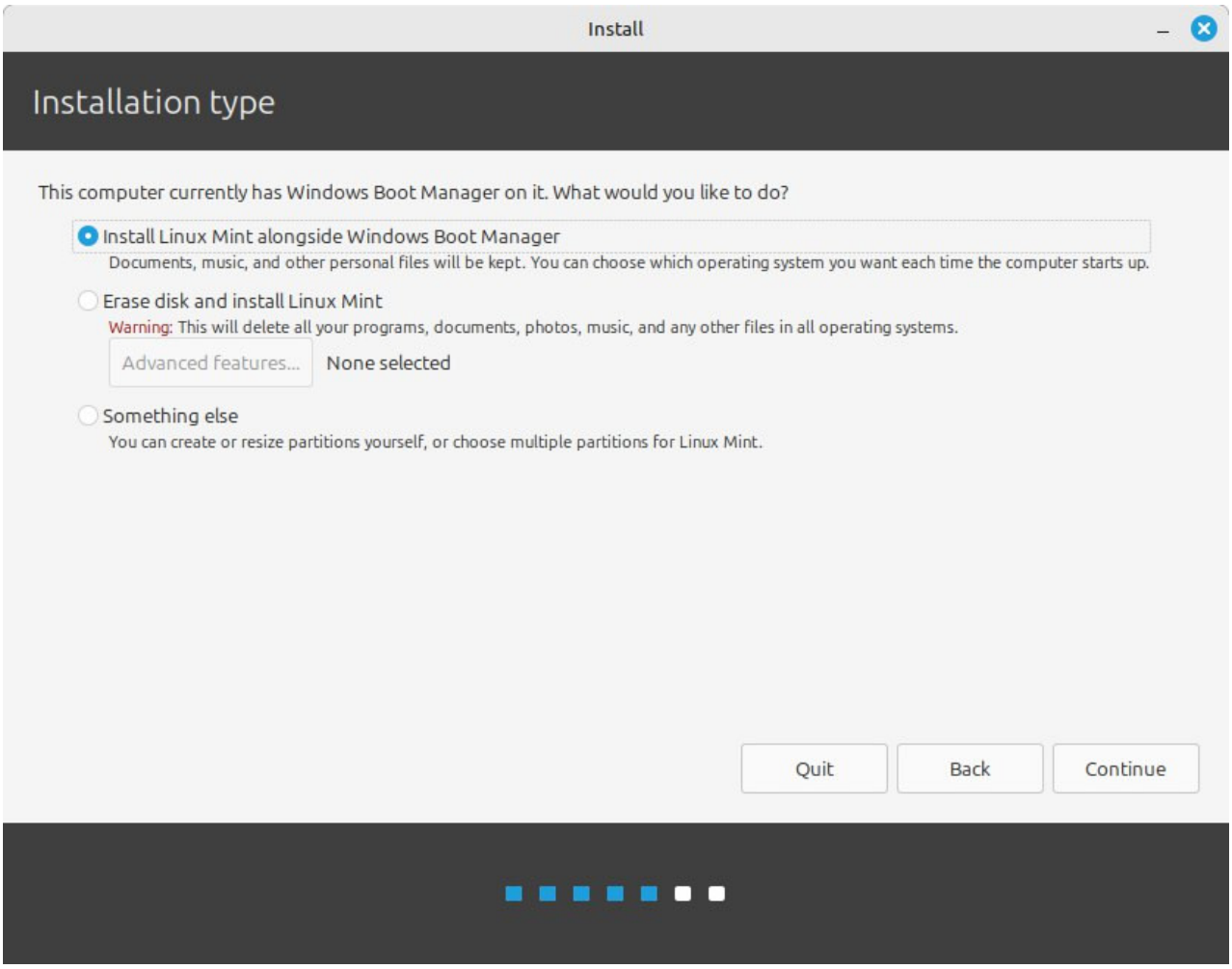
1. Click on the Install Linux Mint icon on your desktop.

2. Select your language, and click on Continue.

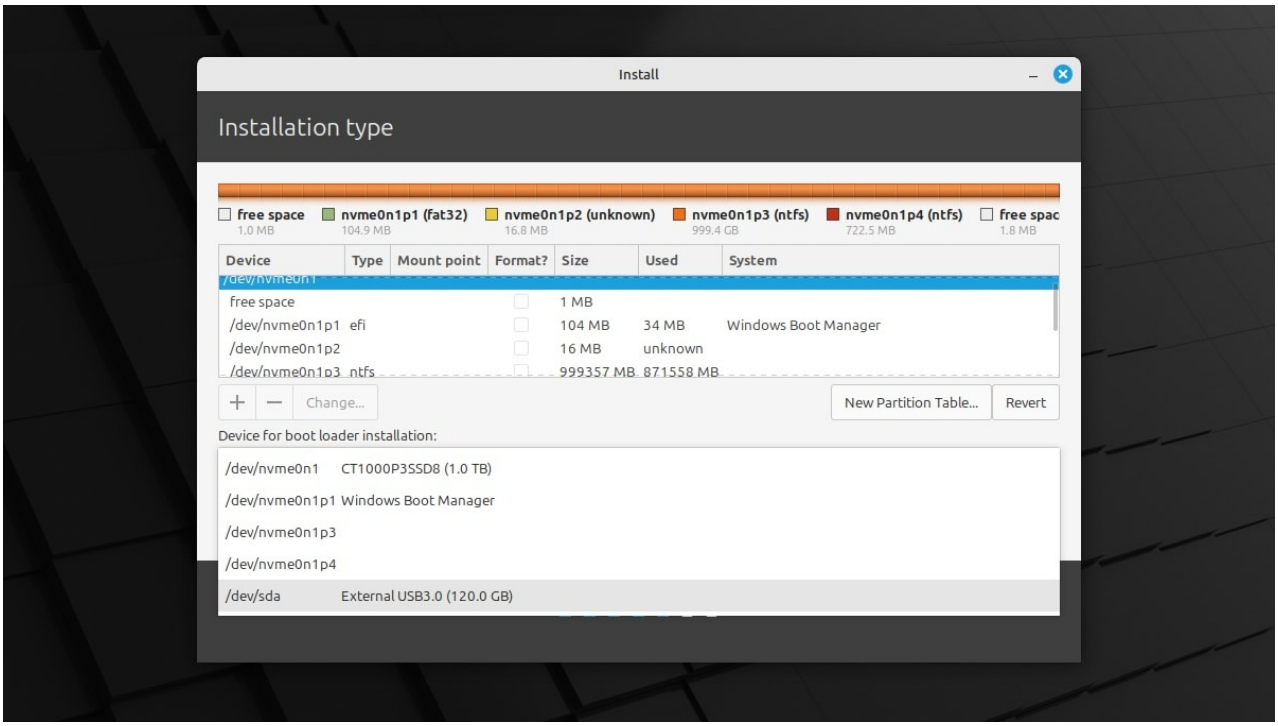
Note: It may ask you to login to your network, you can do so. It's optional, but recommended.

3. Select your Keyboard layout, multimedia codecs, etc.

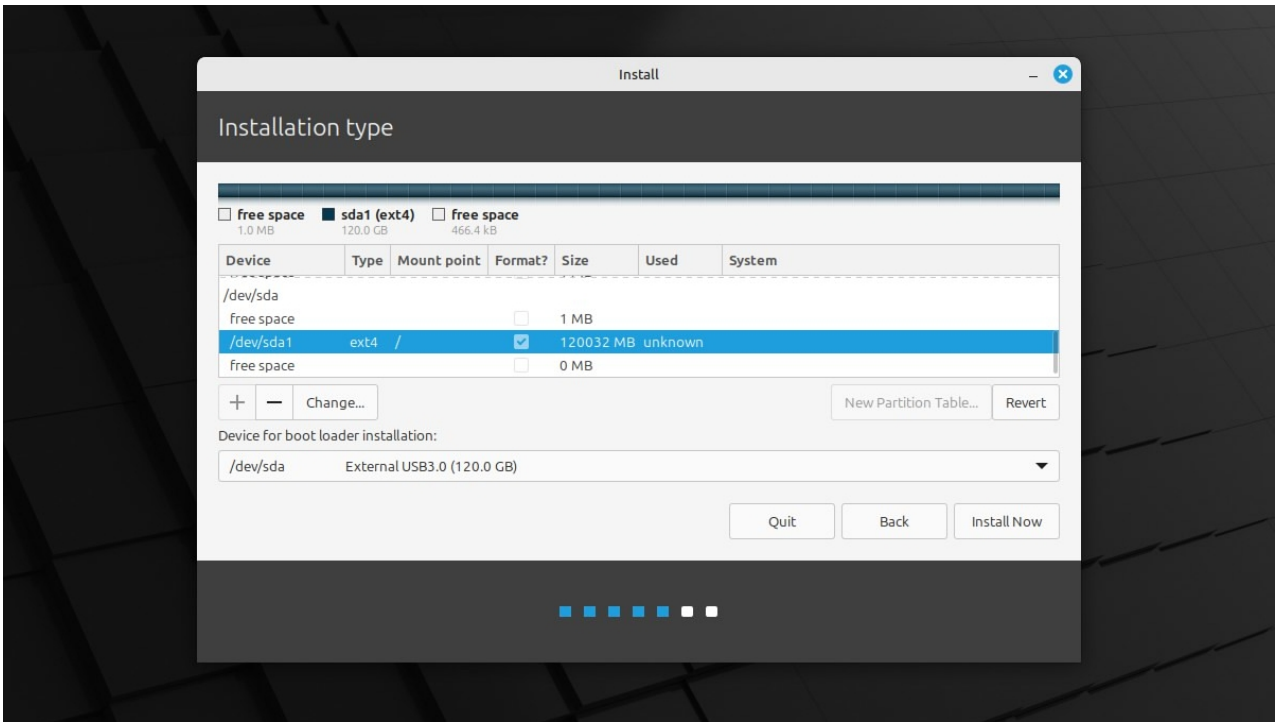
The next 2 steps are really important. Pay attention


Install
Installation type
This computer currently has Windows Boot Manager on it. What would you like to do?
Install Linux Mint alongside Windows Boot Manager
Documents, music, and other personal files will be kept. You can choose which operating system you want each time the computer starts up.
Erase disk and install Linux Mint
Warning: This will delete all your programs, documents, photos, music, and any other files in all operating systems.
Advanced features...
None selected
Something else
You can create or resize partitions yourself, or choose multiple partitions for Linux Mint.
Quit
Back
Continue

4. Select "Something Else".

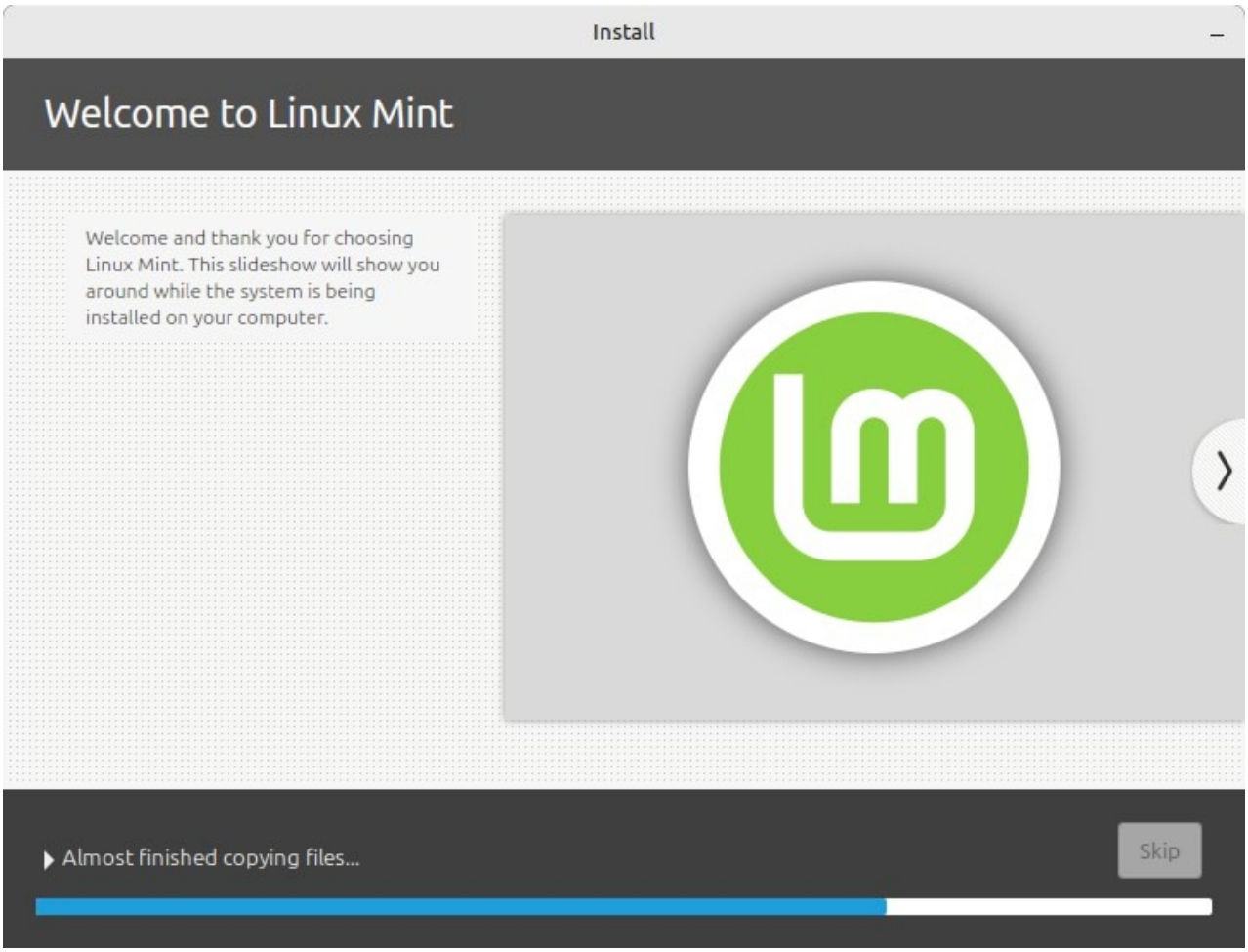


5. Click the drop-down menu under "Device for boot loader installation". Select your external SSD. In my example, it is /dev/sda. Double-click on it.



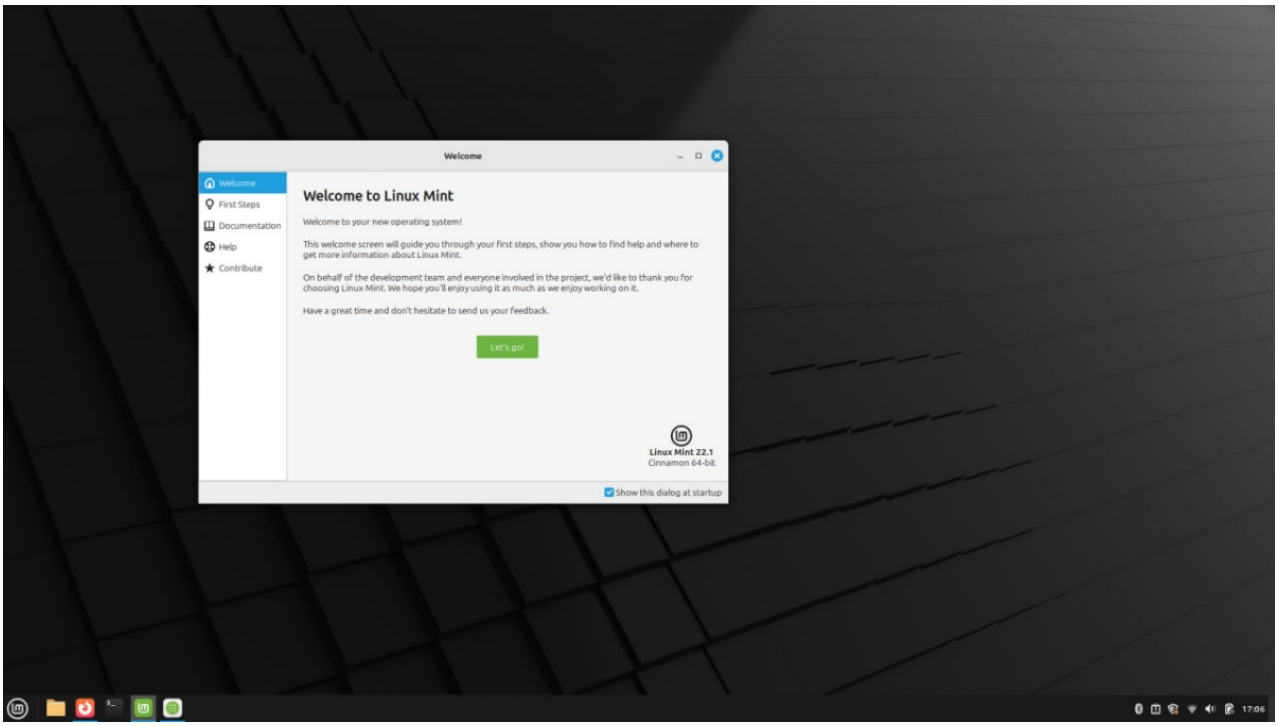
6. You will be prompted whether you want to create a new partition table on the device. Set the mount point to /.

7. Click on Install Now.


Install
Welcome to Linux Mint
Welcome and thank you for choosing Linux Mint. This slideshow will show you around while the system is being installed on your computer.
Almost finished copying files...
Skip

Proceed with the installation by following the on-screen prompts. It may take a while to complete, sit back and relax. Wait till it finishes installing, and select reboot.

Welcome to Linux!


Welcome
Welcome
First Steps
Documentation
Help
Contribute
Welcome to Linux Mint
Welcome to your new operating system!
This welcome screen will guide you through your first steps, show you how to find help and where to get more information about Linux Mint.
On behalf of the development team and everyone involved in the project, we'd like to thank you for choosing Linux Mint. We hope you'll enjoy using it as much as we enjoy working on it.
Have a great time and don't hesitate to send us your feedback.
Let's go!
Linux Mint 22.1
Cinnamon 64-bit
Show this dialog at startup

To boot into Windows when you turn your computer on, keep tapping F12 to access the boot menu, select Windows Boot Manager. Repeat the steps and select Linux if you want to boot to Mint. Simple, isn't it? Your favorite browser, and other apps may already be available on Linux. Open the Software Manager to install the apps, and don't forget to open the Driver Manager to get the latest drivers. Update the system software using Update Manager. Interested in discovering new apps, or alternatives to paid ones? Let me point you to the Awesome Linux Software list on GitHub.

Note: Apologies for not including BIOS pictures to guide you with Secure Boot, RST, etc., but my laptop's screen is busted (I use it with an external monitor), and the photos wouldn't be pretty to look at.

I have been using Linux Mint on my external SSD for a week now, everything works fine, even games on Steam run perfectly thanks to Proton, and proprietary drivers from NVIDIA.

About Ashwin

Ashwin has been blogging since 2012 and is known among his friends as the go to tech geek. He is a self-proclaimed Android expert, a PS4 and PC Gamer, a Firefox fanboy, a Nintendo aficionado, and an iOS tinkerer

View all posts by Ashwin →

Previous Post: « "End of 10" Project's aim is to help Windows 10 users keep their PCs